

**IN THE DRAWINGS**

Please replace Figure 4 with the enclosed substitute Figure 4, which is amended to include sequence identification numbers.

Enclosure: Replacement Figure 4

**REMARKS UNDER 37 CFR § 1.111**

**Formal Matters**

Claims 1-4, 9-14, 19-24, 27-28, and 30-36 are pending after entry of the amendments set forth herein.

Claims 1-4, 9-14, 19, 20, 26, 35 and 36 were rejected.

Claims 21-24, 27, 28 and 30-34 were allowed.

Claims 1-4, 9, 13, 19-24, 27-28, 30-32, and 35 have been amended. Support for these amendments is found in the claims as originally filed, as well as in the specification at, for example, page 5, line 34 through page 6, line 3; and page 6, lines 5-9.

New claims 37-40 have been added. Support for new claims 37-40 is found in the claims as originally filed, as well as in the specification at, for example: original claims 2 and 3, page 2, lines 24-35; and page 3, lines 1-14.

The specification has been amended to address the objections raised by the Examiner. The specification has been amended on page 10, lines 33 and 34, page 11, lines 31 and 32, and page 17, line 12 to insert sequence identifiers for the nucleotide and amino acid sequences.

Figure 4 has been amended so as to include sequence identification numbers.

The application is amended to insert a substitute Sequence Listing (attached) according to 37 CFR § 1.825. The substitute Sequence Listing includes sequences presented in the figures as originally filed. A substitute CRF is submitted herewith.

Applicants respectfully request reconsideration of the application in view of the amendments and remarks made herein.

No new matter has been added.

**Statement Regarding the Sequence Listing**

I hereby certify that the enclosed Sequence Listing is being submitted under 37 CFR §§ 1.821(c) and (e) in paper and computer readable form (Compact Disk labeled 'CRF').

As required by 37 CFR 1.821(f), I hereby state that the content of the paper and computer readable copy of the Sequence Listing, submitted in accordance with 37 C.F.R. §1.821(c) and (e) are the same. The Computer Readable Format (CRF), being submitted under 37 CFR §§ 1.52(e) and 1.824, is formatted on IBM-PC, the operating system compatibility is MS-Windows and the file listing is:

Seqlist.txt 30.7 KB created March 4, 2004.

I hereby certify that the enclosed submission includes no new matter. The Sequence Listing was prepared with the software FASTSEQ, and conforms to the Patent Office guidelines. Applicant respectfully submits that the subject application is in adherence to 37 CFR §§ 1.821-1.825.

### **Allowable Subject Matter**

Applicants acknowledge with gratitude the Examiner's indication that claims 21-24, 27, 28 and 30-34 are allowed. Applicants respectfully submit that the amendments to these claims to explicitly encompass the complement of the recited sequence should not affect this determination of allowable subject matter.

### **Claims Drawn to Non-Elected Subject Matter**

Claims 5-8, 15-18 and 25 were canceled without prejudice as being drawn to non-elected subject matter.

### **Objection to the Specification**

The Office Action in paragraph 7 indicates that the specification does not comply with 37 C.F.R § 1.821(d) because nucleotide and amino acid sequences are lacking sequence identifier numbers. The amendments to the specification and the substitute sequence listing submitted herewith obviate this objection, and withdrawal is requested.

### **Objection to Claims 19 and 20**

Claims 19 and 20 were objected to under 37 CFR 1.75(c), as allegedly being of improper dependent form for failing to further limit the subject matter of a previous claim. The amendments to claims 19 and 20 obviate this objection, and withdrawal is requested.

### **Rejection under §112 ¶1 (Office Action paragraph 8)**

Claims 1-4 and 9-14, 19, 20, and 26 have been rejected under 35 U.S.C. § 112, 1¶, as containing subject matter which was not described in the specification in such a way as to demonstrate to the ordinarily skilled artisan that the inventors, at the time of the application was filed, had possession of the claimed invention. This rejection is traversed as it may be applied to the pending claims.

Without conceding to the correctness of the grounds for rejection, claim 1-4 have been amended to remove the objected language “having 95% or more sequence identity to a nucleotide sequence” with respect to exon 1d of the human VDR gene. In addition, claim 26 has been canceled.

Accordingly, withdrawal of this rejection is respectfully requested.

**Rejection under §112 ¶1 (Office Action paragraph 9)**

Claims 1-4 and 9-14, 19, and 20 have been rejected under 35 U.S.C. § 112, 1¶, as containing subject matter which was not described in the specification in such as way as to enable the ordinarily skilled artisan to make and use the invention.

Applicants note that the objected language “specifically hybridizes” does not appear in the version of the claims currently pending. In addition, such language has not been added by the present amendment and response. Therefore, the rejection of claims 1-4 and 9-14 is rendered moot, and applicants request this rejection be withdrawn.

With respect to claims 19 and 20, without conceding to the correctness of the grounds for rejection, claim 19 and 20 have been amended to remove to the objectionable language. Therefore, the rejection of claims 19 and 20 is likewise rendered moot.

Withdrawal of this rejection is respectfully requested.

**Rejection under §112 ¶2 (Office Action paragraph 10)**

Claims 19 and 20 have been rejected under 35 U.S.C. § 112, 2¶, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. Specifically, the Office Action notes that claims 19 and 20 are vague and indefinite because it is unclear how a nucleic acid that hybridizes to a reference nucleic acid differs from one that “specifically” hybridizes thereto (Office Action, paragraph 10.1). In addition, the Office Action objects to the language “high stringency condition” of claim 19 (Office Action, paragraph 10.2).

Without conceding to the correctness of the grounds for rejection, claims 19 and 20 have been amended to remove to the objectionable language. Therefore the rejection of claims 19 and 20 is rendered moot.

Withdrawal of this rejection is respectfully requested

**Rejection under §112 ¶2 (Office Action paragraph 11)**

Claims 35 and 36 have been rejected under 35 U.S.C. § 112, 2¶, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. The Office Action notes that “the vast majority of polynucleotide molecules encompassed by claims 21 to 23 do not encode anything, much less a ‘VDR’ polypeptide.”

Without conceding to the correctness of the grounds for rejection, claim 35 has been amended to include the language “containing a plasmid or expression vector containing a polynucleotide molecule encoding a human vitamin D receptor (VDR) isoform, said polynucleotide comprising the polynucleotide according to claim 21, 22, 23, 24, or 28.”

Withdrawal of this rejection is respectfully requested.

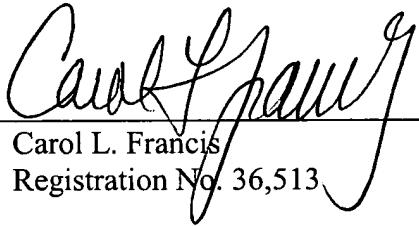
**Conclusion**

Applicant submits that all of the claims are in condition for allowance, which action is requested. If the Examiner finds that a telephone conference would expedite the prosecution of this application, please telephone the undersigned at the number provided.

The Commissioner is hereby authorized to charge any underpayment of fees associated with this communication, including any necessary fees for extensions of time, or credit any overpayment to Deposit Account No. 50-0815, order number RICE-014.

Respectfully submitted,  
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Date: March 29, 2004

By: 

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